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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/847,867      | 05/02/2001  | Boguslaw A. Swedek   | 5252/451001         | 5820             |

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APPLIED MATERIALS, INC.  
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SANTA CLARA, CA 95050

EXAMINER

GRANT, ALVIN J

ART UNIT PAPER NUMBER

3723

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/847,867

Applicant(s)

SWEDEK ET AL.

Examiner

Alvin J Grant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-22 is/are allowed.
- 6) ☒ Claim(s) 1-5, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 2, 4, 16 and 17** are rejected under 35 U.S.C. 102(e) as being anticipated by Lehman et al. '541.

Lehman et al. discloses a chemical mechanical polishing apparatus comprising: a platen to support a polishing surface (**column 5, line 39**); an eddy current monitoring system (**column 5, lines 51-64**); an optical monitoring system (**column 5, line 26**); circuitry in the platen; a computer (**column 5, lines 51-64**); the platen is rotatable (**column 5, lines 42-44**); a circuitry for combining a first signal from the eddy current monitoring system and second signals from the optical monitoring system into a third signal (**column 5, lines 24-65 and column 13, lines 9-14**); a carrier head to hold a substrate having a conductive layer disposed thereon in contact with the polishing surface (**column 3, lines 45-56**); a motor (**column 10, lines 40-43**); an eddy current monitoring system including an inductor (**column 7, lines 43-45**); and a sensor to measure the strength of the magnetic field and a phase difference between the magnetic field and the drive signal (**column 5, lines 64-66; and column 6, lines 7-48**).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman et al. Lehman et al. is described above. **Referring to claim 2**, Lehman et al. does not specifically disclose an electrical union wherein the output line passes through the rotary electrical union between the circuitry and the computer. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made have used an electrical wherein the output line passes through the rotary electrical union between the circuitry and the computer, in the apparatus of Lehman et al., since applicant has not disclosed that an electrical union wherein the output line passes through the rotary electrical union between the circuitry and the computer solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the apparatus of Lehman et al.

**Referring to claim 5**, Lehman et al. does not specifically state that the circuitry assembles data from the first and second signals into packets, and the computer extracts data from the packets. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the circuitry of Lehman et al. to assemble data from the first and second signals into packets since the examiner takes Official Notice of the equivalence of assembling data from the first and second signals into packets, and the computer extracting data from the packets; and the signal data being stored in memory and then retrieved subsequently therefrom by the computer for their use in the CMP art and the selection of any of these known equivalents to store and retrieve data would be within the level of ordinary skill in the art.

### ***Allowable Subject Matter***

**Claims 18-22** are allowed.

### ***Response to Arguments***

Applicant's arguments filed on 6 October 2003 have been fully considered but they are not persuasive.

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In response to Applicant's argument that Lehman neither teaches nor suggests "circuitry in the platen to combine the first signal from the eddy current monitoring system and second signal from the optical monitoring system into a third signal on an output line," as recited in claim 1, the instant claim is an apparatus claim. Lehman discloses structure for combining the signals from an eddy current monitoring system and an optical monitoring system into a signal that is processed by a computer (column 5, lines 25-64).

In response to Applicant's arguments that Lehman neither teaches nor suggests "a computer configured to calculate a correction factor based on the strength of the magnetic field and calculate a thickness of the conductive layer from the phase difference and the correction factor", Lehman disclosed the structure and the function of the structure is of no patentable consequence in an apparatus claim.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin J Grant whose telephone number is (703) 305-3315. The examiner can normally be reached on Mon-Fri 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on (703) 308-2687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1184.

ajg

A handwritten signature in black ink, appearing to read "Joseph J. Hail, III". The signature is fluid and cursive, with a stylized "H" and a clear "III" at the end.

**Joseph J. Hail, III**  
**Supervisory Patent Examiner**  
**Technology Center 3700**